

CLAIMS

1. A transportable container for high purity, high cost, liquid chemicals capable of maximizing dispensing of the liquid chemical content of the container at deviations from an upright position without dispensing all of the liquid chemical, comprising; a shell comprising a top wall, a side wall and a bottom wall, the bottom wall having an internal surface contacting liquid chemical with a concave upward contour having a lowest most point axially central to the container, a first orifice capable of being used as an inlet, a second orifice capable of being used as an outlet comprising a diptube through which the liquid chemical can be dispensed from said container with an outlet end adjacent the top surface and an inlet terminal end adjacent the lowest most point, a level sensor assembly capable of signaling at least one level of liquid chemical in the container having an output end adjacent the top surface and a terminal end containing a lowest most level sensing sensor adjacent the lowest most point; the diptube and the level sensor assembly being more proximate to one another at their terminal ends than their ends adjacent the top surface.

2. The container of Claim 1 wherein said orifice capable of being used as an inlet and said orifice capable of being used as an outlet each have a valve for controlling fluid flow through said orifices.

3. The container of Claim 2 wherein said valves are pneumatic valves capable of being operated by remote automated control.

4. The container of Claim 1 wherein said concave upward contour is a quadric surface.

5. The container of Claim 1 wherein an internal surface of said sidewall forms a smooth curved surface with said internal surface of said bottom wall.

6. The container of Claim 5 wherein said sidewall has a cylindrical shape.

7. The container of Claim 1 wherein said top wall has an internal surface with a concave downward contour.

8. The container of Claim 1 wherein said concave downward contour is a quadric surface.

5 9. The container of Claim 6 wherein said diptube is axially central to said sidewall.

10 10. The container of Claim 6 wherein said level sensor assembly is axially central to said sidewall.

11 11. The container of Claim 1 wherein said level sensor assembly comprises two or more discrete level sensors.

12. The container of Claim 11 wherein said level sensor assembly comprises three level sensors; a high level sensor adjacent the output end of the level sensor
15 assembly; a low level sensor adjacent the terminal end of the level sensor assembly and a middle level sensor between the high level sensor and the low level sensor.

13. The container of Claim 1 wherein said level sensor assembly is selected from the group consisting of an ultrasonic level sensor assembly, a capacitance level
20 sensor assembly, an optical level sensor assembly and a float level sensor assembly.

14. A transportable metallic container for high purity, high cost, liquid chemicals capable of maximizing dispensing of the liquid chemical content of the container at deviations from an upright position without dispensing all of the liquid
25 chemical, comprising; a metallic shell comprising a top wall, a cylindrical side wall and a bottom wall, the bottom wall having an internal surface contacting liquid chemical with a hemispherical upward contour having a lowest most point axially central to the container side wall, a first valved orifice capable of being used as an inlet, a second valved orifice capable of being used as an outlet comprising an axially central diptube through which
30 the liquid chemical can be dispensed from said container with an outlet end adjacent the top surface and an inlet terminal end adjacent the lowest most point, an ultrasonic level sensor assembly capable of signaling at least three different levels of liquid chemical in the container having an output end adjacent the top surface and a terminal end containing a lowest most level sensing sensor adjacent the lowest most point; the

diptube and the level sensor assembly being more proximate to one another at their terminal ends than their ends adjacent the top surface.

15. The container of Claim 14 wherein said top wall has a hemispherical
5 downward contour.

16. The container of Claim 14 wherein said level sensor assembly is
positioned at an angle to the diptube with the terminal end of said assembly and said
diptube being in close proximity to one another and the internal surface of said bottom
10 wall at the axially central lowest most point of said hemispherically upward contour of
said internal surface of said bottom wall.

17. A transportable metallic container for high purity, high cost, liquid
chemicals capable of maximizing dispensing of the liquid chemical content of the
15 container at deviations from an upright position without dispensing all of the liquid
chemical, comprising; a metallic shell comprising a top wall, a cylindrical side wall and a
bottom wall, the bottom wall having an internal surface contacting liquid chemical with a
hemispherical upward contour having a lowest most point axially central to the container
side wall, a first valved orifice capable of being used as an inlet, a second valved orifice
20 capable of being used as an outlet comprising a diptube through which the liquid
chemical can be dispensed from said container with an outlet end adjacent the top
surface and an inlet terminal end adjacent the lowest most point, an axially central
ultrasonic level sensor assembly capable of signaling at least three different levels of
liquid chemical in the container having an output end adjacent the top surface and a
25 terminal end containing a lowest most level sensing sensor adjacent the lowest most
point; the diptube and the level sensor assembly being more proximate to one another at
their terminal ends than their ends adjacent the top surface.

18. The container of Claim 17 wherein said top wall has a hemispherical
30 downward contour.

19. The container of Claim 17 wherein said diptube is positioned at an angle
to the level sensor assembly with the terminal end of said assembly and said diptube
being in close proximity to one another and the internal surface of said bottom wall at the

axially central lowest most point of said hemispherically upward contour of said internal surface of said bottom wall.

20. A transportable container for high purity, high cost, liquid chemicals
- 5 capable of maximizing dispensing of the liquid chemical content of the container at deviations from an upright position without dispensing all of the liquid chemical, comprising; a shell comprising a top wall, a side wall and a bottom wall, the bottom wall having an internal surface contacting liquid chemical with a conical upward contour having a lowest most point axially central to the container, a first orifice capable of being
- 10 used as an inlet, a second orifice capable of being used as an outlet comprising a diptube through which the liquid chemical can be dispensed from said container with an outlet end adjacent the top surface and an inlet terminal end adjacent the lowest most point, a level sensor assembly capable of signaling at least one level of liquid chemical in the container having an output end adjacent the top surface and a terminal end
- 15 containing a lowest most level sensing sensor adjacent the lowest most point; the diptube and the level sensor assembly being more proximate to one another at their terminal ends than their ends adjacent the top surface.

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